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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,530	02/09/2001	Willy Sagefalk	STGUP008	5601

28436 7590 01/19/2007  
IP CREATORS  
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CUPERTINO, CA 95015

EXAMINER
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YE, LIN

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/700,530

Applicant(s)

SAGEFALK ET AL.

Examiner

Lin Ye

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicants' arguments filed 10/12/06 have been fully considered but they are not persuasive as to claims 1, 2 and 4-7.

For the claim 1, the applicants argue that nowhere in the Nicholson reference (U.S. Patent 5,543,954) is mirror 12 referred to as a tilt mirror (See applicant's REMARKS, page 6, lines 22-25); nowhere in the Nicholson reference is there teaching or disclosure of any mechanism for tilting mirror 12 in a manner which dynamically changes the angle of incidence of mirror 12 with respect to the optical axis (See applicant's REMARKS, page 5, lines 15-22).

The examiner disagrees. It is well known the panning and tilting mirrors are used for adjusting the optical field of view of the camera. The Nicholson reference clearly shows the panning mirror (second mirror 14 rotates about its X-axis) and tilting mirror (first mirror 12 rotates about its Y-axis) are used for adjusting the field of view of the camera in order to get the spherical view (almost all areas) (See Col. 5, lines 5-13). In addition, the Nicholson reference discloses a detail mechanism for rotating tilting mirror 12 in an arc of 360° in Col. 5, lines 14-39, "... in this manner, first mirror 12 is rotated, providing a scan the width of mirror 12 in an arc of 360° about its Y-axis. **In order to scan a different arc**, solenoid 82 is energized thereby pulling brake 84 away from drive ring 76 and engaging idler wheel 86 between primary drive belt 32 and drive ring 76..... Hence, almost any point can be scanned by rotating first mirror about its Y-axis or rotating second mirror 14 about its X-axis or

rotating second mirror 14 about its X-axis .....”. This shows the teaching for mechanism for tilting mirror 12 in a manner which dynamically changes the angle of incidence of mirror 12 with respect to the optical axis.

For the claim 2, the applicants argue that the Nicholson’s belt drive is not the applicant’s planetary linkage and at no time does belt 88 exhibit planetary movement with respect to either ring 42 or 34.

The examiner disagrees. The Nicholson reference shows in Figures 1 and 3, the mirror assembly (22) coupling the panning mirror (14) and the tilting mirror (12) and including: a mirror wheel (x-axis drive ring element 76); a guide wheel (primary drive ring element 34 and Y-axis drive ring 42); a planetary member (y-axis drive belt element 90) which is mechanically coupled to the guide wheel together with the mirror wheel. Additionally, the Nicholson reference discloses in Col. 5, lines 14-25, “... **Y-axis drive ring 42 is connected to combination drive ring via a Y-axis drive belt 88 and a pair of idlers 90 that change the direction of drive belt 88.....**” Therefore, the mirror assembly is considered as “a planetary linkage” and the drive belt element (a pairs idlers 90) is considered as “planetary member” recited in claim 2.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nicholson U.S. Patent 5,543,954.

Referring to claim 1, Nicholson discloses in Figures 1 and 3, an apparatus for panning and tilting an optical input to an objective of a camera; and the apparatus comprising: a panning mirror (e.g., mirror element 14 shown in Fig. 3, wherein a camera is attached to ring element 38 as disclosed on column 4, lines 1-3) rotationally coupled to the camera for bending the optical input (X-axis) to align with an optical axis (Y-axis) of the objective and the optical input and the optical axis defining a plane (X-Y plane), and a rotation of the panning mirror (14) panning the optical input to the objective of the camera about the optical axis; and a tilting mirror (e.g., mirror element 12 of Figs. 1 and 3; column 5, lines 14-39) radially displaced from the panning mirror about the optical axis, and rotationally coupled to the camera for rotation concentric with the panning mirror about the optical axis, and the tilting mirror (12) optically coupled with the panning mirror (14) and the tilting mirror configured to tilt the optical input in selectable amounts (e.g., the field of view is almost **spherical**). In addition, the Nicholson reference discloses a detail mechanism for rotating tilting mirror 12 in an arc of 360° in Col. 5, lines 14-39, “... in this manner, first mirror 12 is rotated, providing a scan the width of mirror 12 in an arc of 360° about its Y-axis. **In order to scan a different arc**, solenoid 82 is energized thereby pulling brake 84 away from drive ring 76 and engaging idler wheel 86 between primary drive belt 32 and drive ring 76..... Hence, almost any point can be scanned by rotating first mirror about its Y-axis or rotating second mirror 14 about its X-axis or rotating second mirror 14 about its X-axis

.....". This shows the teaching for mechanism for tilting mirror 12 in a manner which dynamically changes the angle of incidence of mirror 12 with respect to the optical axis) about an axis substantially perpendicular to the plane (e.g., the Y-axis is considered as optical path, the tilting mirror 12 rotating arc of  $360^\circ$  around the Y-axis, therefore, the rotating of mirror 12 respected to the panning mirror 14 is considered as substantially perpendicular to the plane containing a optical path Y-axis).

Referring to claim 2, the Nicholson reference discloses the apparatus of claim 1, further comprising: a planetary linkage (mirror assembly 22) coupling the panning mirror (14) and the tilting mirror (12), and including a mirror wheel rotatable about the optical axis, and the panning mirror affixed to the mirror wheel and the tilting mirror tiltably affixed to the mirror wheel both for rotation about the optical axis (e.g., the x-axis drive ring element 76 of Fig. 2, wherein the x-axis drive ring is affixed to both the panning mirror and the tilting mirror for rotation about the optical axis as illustrated in Fig. 2; column 4, lines 52-55); a guide wheel rotatable about the optical axis (e.g., primary drive ring element 34 and Y-axis drive ring element 42 of Figures 1-2); and a planetary member mechanically coupled to both the guide wheel together with the mirror wheel such that a relative rotation there between produces a rotation of the planetary member and the planetary member further coupled to the tilt mirror such that the rotation of the planetary member effects the tilting of the mirror (e.g., the planetary member is the y-axis drive belt element 90 which is mechanically coupled to the guide wheel as shown in Figs. 1 and 3 and the guide wheel is mechanically coupled to the mirror wheel and as such the planetary member is mechanically coupled to both the guide wheel together with the mirror wheel. Further, as described on column 5, lines 14-25 a

brake is used to hold mirror wheel 76 so as to cause relative rotation between the guide wheel and the mirror wheel and thus produce rotation of the planetary member element 90 which in turn effects the tilting of the mirror 12).

Referring to claims 4-7, the Nicholson reference discloses all subject matter as discussed with respected same comments to claims 1-2.

### ***Conclusion***

4. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Lye', with a long horizontal flourish extending to the right.

Lin Ye  
Primary Examiner  
Art Unit 2622

January 16, 2007